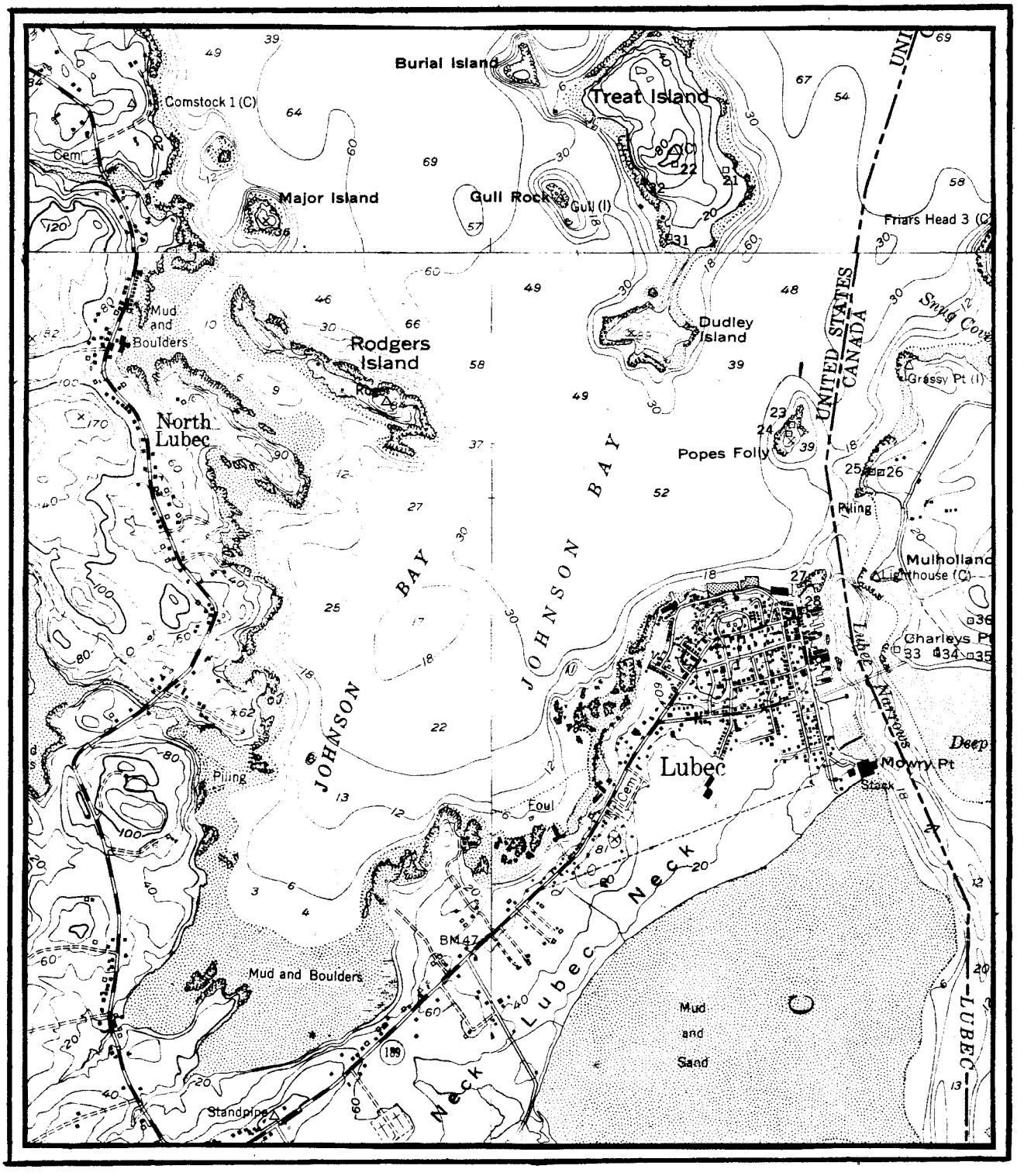
JOHNSON BAY
AND RODGERS ISLAND HARBOR,
LUBEC, MAINE

SMALL NAVIGATION PROJECT
INITIAL APPRAISAL REPORT



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

JUNE 1987

401-670

JOHNSON BAY
AND RODGERS ISLAND HARBOR
LUBEC, MAINE

SMALL NAVIGATION PROJECT
RECONNAISSANCE REPORT

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

JUNE 1987

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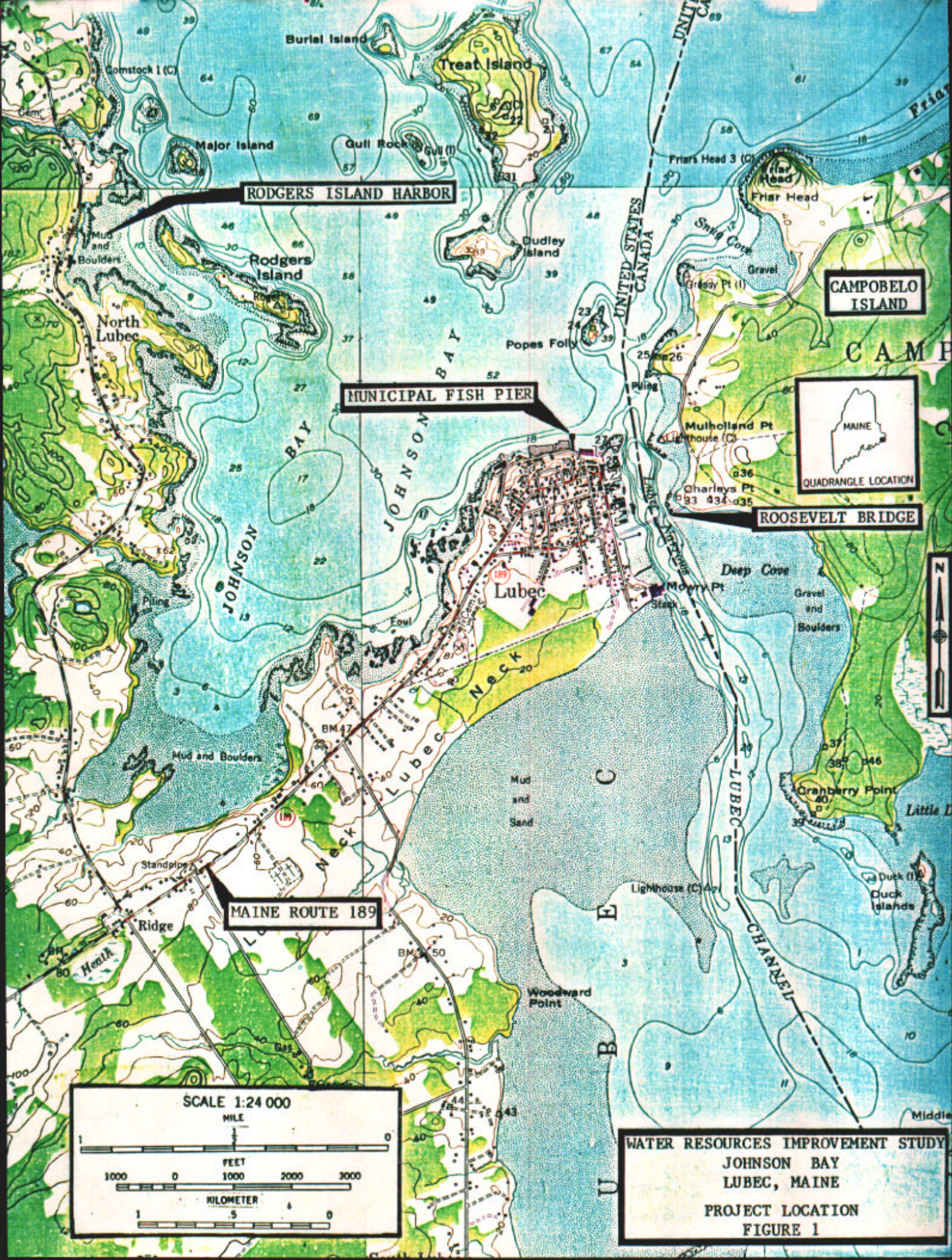

WATER RESOURCES IMPROVEMENT STUDY
JOHNSON BAY
LUBEC, MAINE

PROJECT LOCATION
FIGURE 1

INTRODUCTION

This Reconnaissance Report is the result of a preliminary engineering and economic feasibility study of navigation improvements in Johnson Bay, Lubec, Maine.

Lubec is the easternmost town in the United States located on the eastern Maine coast in Washington County across the Lubec Channel from Campobello Island, New Brunswick, Canada. Lubec is located about 5 miles south across Johnson Bay from the city of Eastport, Maine. The village of Lubec is the town center and most populated area with smaller villages located along State route 189 and the several penninsulas extending north into Cobscook Bay. Lubec village was formerly a major fish processing and transshipment center but now has only two plants remaining in operation. The Lubec lobstering and fishing fleet is currently scattered about the many small coves due to lack of a protected centralized off-loading facility. A proposed expansion of ferry service connecting Maine and New Brunswick ports in the Passamaquoddy Bay Region is restricted from using an existing pier as its terminal in even mild storm conditions due to lack of protection from waves along the Lubec waterfront. The geographic scope of this study was generally limited to Johnson Bay and the town of Lubec. The immediate study area is shown in Figure 1.

STUDY AUTHORITY

The town of Lubec requested the Corps to assess the feasibility of constructing a breakwater to protect the local fishing fleet in Lubec Harbor at a public meeting held in Lubec on 17 July 1984.

Earlier the town of Lubec requested that the Corps of Engineers study the feasibility of Federal participation in providing a protected harbor in Lubec under existing continuing authorities for small navigation projects in December 1976. Local debate over site selection continued through 1980 when a fish pier, boat ramp and ferry terminal were constructed along the north shore of Lubec Neck on Johnson Bay. The site of the new pier was located in a deep water area so as not to require dredging. Use of the new pier declined significantly, however, over the first years following pier construction prompting local officials to renew the request for a study.

This Reconnaissance report was prepared and is submitted under the authority and provisions of Section 107 of the 1960 River and Harbor Act, as amended.

PRIOR STUDIES AND IMPROVEMENTS

The eastern waterfront of the village of Lubec borders on Lubec Channel, the site of an existing Federal navigation project as shown in Figure 2. The existing Federal Channel is 500 feet wide by -12 feet deep at mean low water (MLW) and extends about 16,700 feet from Quoddy Roads to

Johnson Bay. The channel was constructed in 1890 and widened in 1894 and 1905 to provide a protected passage for vessels traveling to Lubec, Johnson Bay, Passamoquoddy and Cobscook Bays and the city of Eastport. The Roosevelt Memorial - Campobello Bridge crosses the channel connecting Lubec Village with Campobello Island, New Brunswick. The bridge is a fixed span with a clearance of 47 feet at mean high water (MHW).

Stone breakwaters were constructed along the U.S. shoreline to protect structures from the effects of the extreme tidal currents which pass through the channel. A 260-foot long breakwater at Gun Rock was constructed in 1884. It was extended a further 90 feet in 1956.

EXISTING CONDITIONS AND PROBLEMS

In 1976, the town approached various Federal and State agencies in an effort to secure funding for construction of a municipal fish pier facility to alleviate the lack of adequate landing facilities for the town's commercial fishermen and a proposed Lubec-Eastport ferry service. Funding was secured through the Farmers Home Administration and the Economic Development Administration and the pier was completed on the Johnson Bay side of Lubec Neck in 1980. Site selection was limited to a steeply sloping area to compensate for the 18-foot mean tide range and eliminate the need for dredging.

Since construction, use of the pier has been minimal because of the unprotected nature of the northeast shore of Lubec Neck in the downtown area. The under-utilized pier is exposed to wind and waves across a 15-mile fetch over Johnson and Passamaquoddy Bays. Wave heights frequently exceed two feet in the mildest conditions. Storm driven waves result in much higher seas. Because of these conditions, only the 3 larger offshore sardine trawlers make use of the pier and these only during mildest conditions. The 52 boat lobstering, inshore scalloping and multi-purpose fishing boats continue to work out of their traditional, more sheltered, distant small coves. This practice necessitates trucking and rehandling of the catch to transport it to downtown processing and packing houses in the village center. The fishermen incur increased transportation and harvesting costs and lost time. Many of these scattered anchorages are shallow resulting in tidal delays for those boats. The 18-foot mean and 24-foot extreme tidal ranges make these delays considerable.

Lack of adequate protection for the pier and landing area discourages use by commercial fishermen and limits the potential for ferry service. Those vessels which risk using the unprotected pier and landing incur some damage due to wave action. Vessels which base their operations in the many small coves forfeit valuable winter fishing time when the coves ice-over.

CORPS OF ENGINEERS

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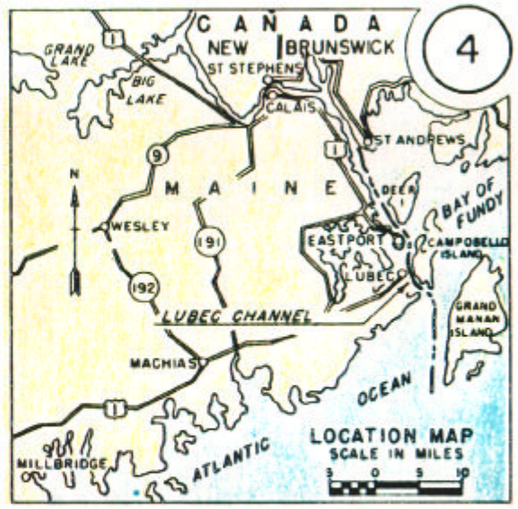
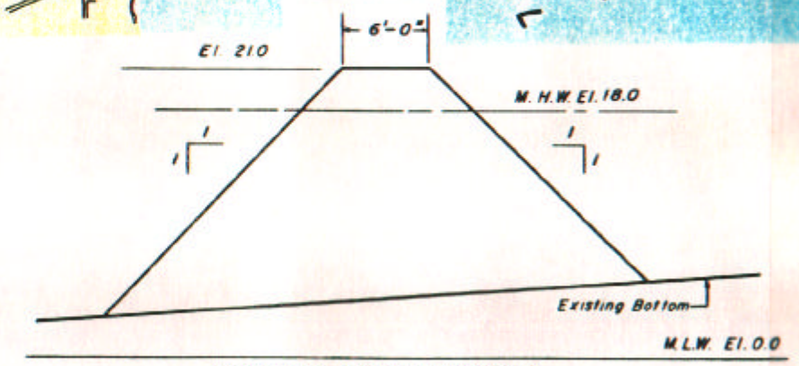


BRIDGE CLEARANCES

ROOSEVELT HWY. BRIDGE (FIXED)

HOR: 100 FT.

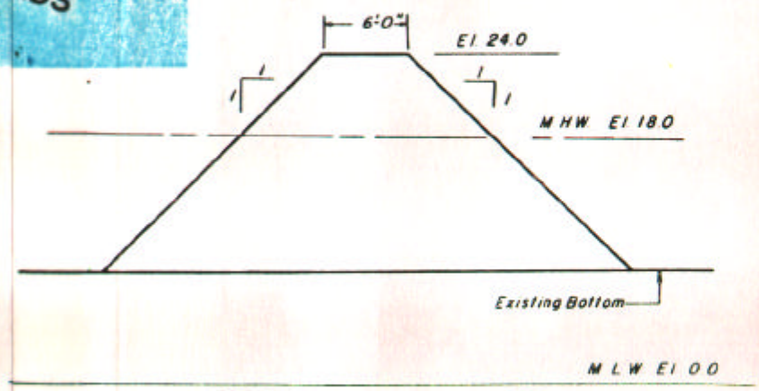
VERT: 47.5 M.H.W.



SECTION OF BREAKWATER AT GUN ROCK

SCALE IN FEET

6 0 6 12



SECTION OF BREAKWATER AT SHORT POINT

SCALE IN FEET

6 0 6 12

WATER RESOURCES IMPROVEMENT STUDY
JOHNSON BAY
LUBEC, MAINE

EXISTING FEDERAL PROJECT
LUBEC CHANNEL

FIGURE 2

IN 1 SHEET

SCALE IN FEET

1000 0 1000 2000 3000 4000

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.

PLAN FORMULATION

Because of the extreme tidal range, natural protection at the area's numerous coves is limited to lower stages of the tide. The only alternative to structural improvements is therefore to continue the existing conditions. Transfer of the fishing fleet to other ports in this remote area such as Cutler or Eastport would also entail structural improvements to expand available anchorage at those sites. Given the distance between communities in this area, such a transfer would be discouraged by increased transportation costs and relocation of families. Transfer of the ferry terminal would also be impractical. These considerations make transfer of existing and potential operations to a site removed from Johnson Bay unacceptable to State and local needs.

Based on local estimates and records, there are approximately 55 commercial fishing boats in the town of Lubec. Three of these are sardine boats in the 55-65 foot range which fish year round with a 3 person crew. Seventeen are scallop draggers and multi-purpose boats in the 35-45 foot range which scallop year round or lobster 2/3 of the year and finfish 1/3 of the year with a 2 person crew. The remaining 35 boats are full-time lobster boats under 35 feet in length with a 1 or 2 person crew. The 3 larger sardine boats and some of the smaller boats work out of Lubec Neck close to the two processing plants. The remaining boats work out of the many small coves primarily located in North Lubec on Seward Neck, 4 to 5 miles from the existing pier, which afford limited natural protection.

ALTERNATIVE PLANS CHOSEN FOR EVALUATION

Two alternative solutions to the problem of providing a protected harbor with adequate off-loading facilities for the Lubec fleet were investigated. The first involves construction of a breakwater to protect the existing pier and provide an anchorage at Lubec Neck on Johnson Bay. The second involves construction of a new pier, dredging of a channel, turning basin and anchorage at Rodgers Island Harbor in North Lubec. The Rodgers Island site was selected because of its available depth, existing degree of natural protection, proximity to an improved road and existing use as a harbor by many Lubec fishing boats. The disadvantages of this site are its distance from Lubec village and its lack of parking area which would lessen its suitability as a ferry terminal or bulk cargo transfer area.

The obvious advantage of the Lubec Neck alternative is that the pier has already been constructed. However, the limited size of this facility may not adequately lend itself to operation as a multiple use facility. The existing municipal marina, i.e. fishing activities, bulk cargo off-loading and ferry services would compete for berthing time at the pier and limit available parking space in the vicinity. The anchorage protected by any structure would be of limited size due to the need to locate any protective structure as near to shore and shallow water as possible so as to minimize costs. This lack of anchorage would necessitate berthing of

some boats alongside the pier and dredging of these berthing areas at local cost. Existing depths from the pier seaward are sufficient to make anchorage dredging unnecessary at the Lubec Neck site.

A protective structure for the existing Lubec Neck pier would have to be located in waters ranging from -12 to -38 feet MLW. Clearly, harbor construction at Lubec Neck would be far more costly than at Rodgers Island Harbor. Future expansion of marine activity at Lubec Neck would involve additional breakwater construction while similar expansion at Rodgers Island would only require less costly additional dredging. A rough outer surface of a potential structure would tend to reduce runup considerably. Protection against a 10-foot wave at mean high tide could therefore be achieved with a top elevation of +28 feet MLW and a minimum 6-foot top width.

Channel and anchorage designs for the Rodgers Island site were based on a design vessel length of 35-feet, unloaded draft of 4 feet, loaded draft of 4.5 feet and a 12.5-foot beam. An 80-foot channel width would be sufficient to allow for two-way traffic. Allowing for 1-foot of underkeel clearance and 1.5 foot average wave conditions in both the anchorage and channel and 0.5 feet of squat in the channel would require minimum project depths of -8 feet MLW in the channel and turning basin area and -6 feet MLW in the anchorage. As previously stated, sufficient depths already exist at the Lubec Neck site. However, dredging of berthing areas alongside the pier in order to allow greater access and reduce the number of boats requiring space in the anchorage would have to be accomplished at local cost. Construction of a new pier at the Rodgers Island site and dredging of more limited off-loading-only berths for such a structure would also be a local responsibility.

The design vessel size for determining anchorage area size differs for each of the two sites. The limited area available for anchorage at the Lubec Neck site would require the larger vessels in the fleet to use permanent berths alongside the existing pier. The design vessel length for the anchorage at this site would therefore drop to 30 feet instead of the 35-foot length for the Rodgers Island Harbor site. Natural depths in the area to be protected at Lubec Neck range from -18 to -36 feet MLW with the mean depth being about -30 feet MLW. At Rodgers Island, depths would range from the current -10 feet MLW to the dredged minimum of -6 feet MLW with the mean depth being about -8 feet MLW. The extreme 18-foot mean tide range would allow moored vessels to swing wide areas as the tide receeds requiring a large area per boat.

At Lubec Neck, the 3 large sardine boats would be permanently berthed at the pier in locally dredged slip areas. Of the remaining 17 multi-purpose and 35 small lobster boats, 5 and 21 boats of these two types, respectively, would be expected to use the existing pier and new anchorage based on local projections. The remaining boats would choose not to relocate from their existing bases primarily located in North Lubec. The 26 boats requiring anchorage at Lubec Neck averaging 30 feet in length

would need approximately 9,400 square feet per boat or a total area of 5.6 acres. The protected area behind the proposed breakwater not requiring dredging and allowing for a sufficient safe access fairway to the existing pier would equal about 6.8 acres. This is more than enough area to accommodate the projected fleet and several transients without dredging, except for local berthing areas.

At Rodgers Island Harbor in North Lubec, no boats would be berthed at the pier since lack of available protected area for anchorage is not a concern. While the 3 large sardine boats would probably continue to off-load at Lubec Neck in calm weather, they would most likely seek anchorage at Rodgers Island Harbor during storms. Of the 17 multi-purpose/scallop and 35 lobster boats, a greater number could be expected to be attracted to this more protected site nearer to their homes and present anchorage sites than would be expected to be attracted to the Lubec Neck site. It is anticipated that 10 multi-purpose/scallop and 27 of the lobster boats would use the new anchorage. These 37 boats averaging 35 feet in length would require approximately 5,300 square feet per boat or a total of about 4.5 acres of anchorage. During storm conditions, some of the remaining fleet and a small number of transients could also be expected to seek anchorage here. A total anchorage of 5.2 acres could be expected to provide sufficient area. In the northern reaches of the harbor, natural depths in excess of -6 feet MLW make dredging of 90 percent of this area unnecessary. The remaining 10 percent of this area has an average depth of -4 feet MLW requiring a dredge cut of 3 feet to complete the anchorage including a one-foot overdepth allowance for a total of about 3,700 cubic yards (cy).

A sufficient turning basin at the new pier site should have a width of about 5 times the design vessel length to facilitate safe manuevering of vessels entering and leaving. The 35-foot design vessel would require a 175-foot wide basin. Since boats up to 45 feet in length could be expected to use the pier to off-load, a width of 200 feet would be considered sufficient and safe. The average depths in the turning basin area are currently +4 feet MLW. To form a design depth of -8 feet MLW corresponding to that of the access channel designed for loaded draft and allowing for a one-foot overdredge, would require a cut of 13 feet (47,700 cy).

The Rodgers Island Harbor entrance channel, 80-feet-wide by -8 feet deep MLW would have to be dredged through the shoal which closes the southern end of the harbor from deep water in Johnson Bay. This shoal currently has a top elevation of -4 feet MLW and a width of 850 feet at a depth of -8 feet MLW. The average depth of this shoal area is therefore -6 feet MLW requiring a 3-foot cut (8,400 cy). An additional 450 foot length of the channel leading up to the turning basin must also be dredged from its average natural depth of -4 feet MLW to -8 feet MLW plus a one-foot over-dredge depth or a cut of 5 feet (7,900 cy).

In order to adequately address the problems and needs of the study area, as previously identified, two alternative preliminary plans of improvement have been developed. The evaluated improvements are shown in Figures 3A and 3B.

Lubec Neck/Johnson Bay

The evaluated improvement for the Lubec Neck site on Johnson Bay consists of Federal and non-Federal improvements. The Federal improvement involves construction of a dogleg rubble-mound breakwater with each leg being 500 feet long. The structure would have a top elevation of +28 feet MLW (+10 feet MHW), a 6-foot top width, side slopes of 1 on 1 1/2 and a roughed outer face. The shoreward leg would extend from the vicinity of the existing Federal breakwater at Gun Rock 500 feet northwesterly to about the -32 foot MLW contour. The seaward leg would extend a further 500 feet west-northwesterly in the direction of the south point of Rodgers Island to about the -36 foot MLW contour. The landward and seaward reaches depths of -22 feet and -34 feet MLW respectively.

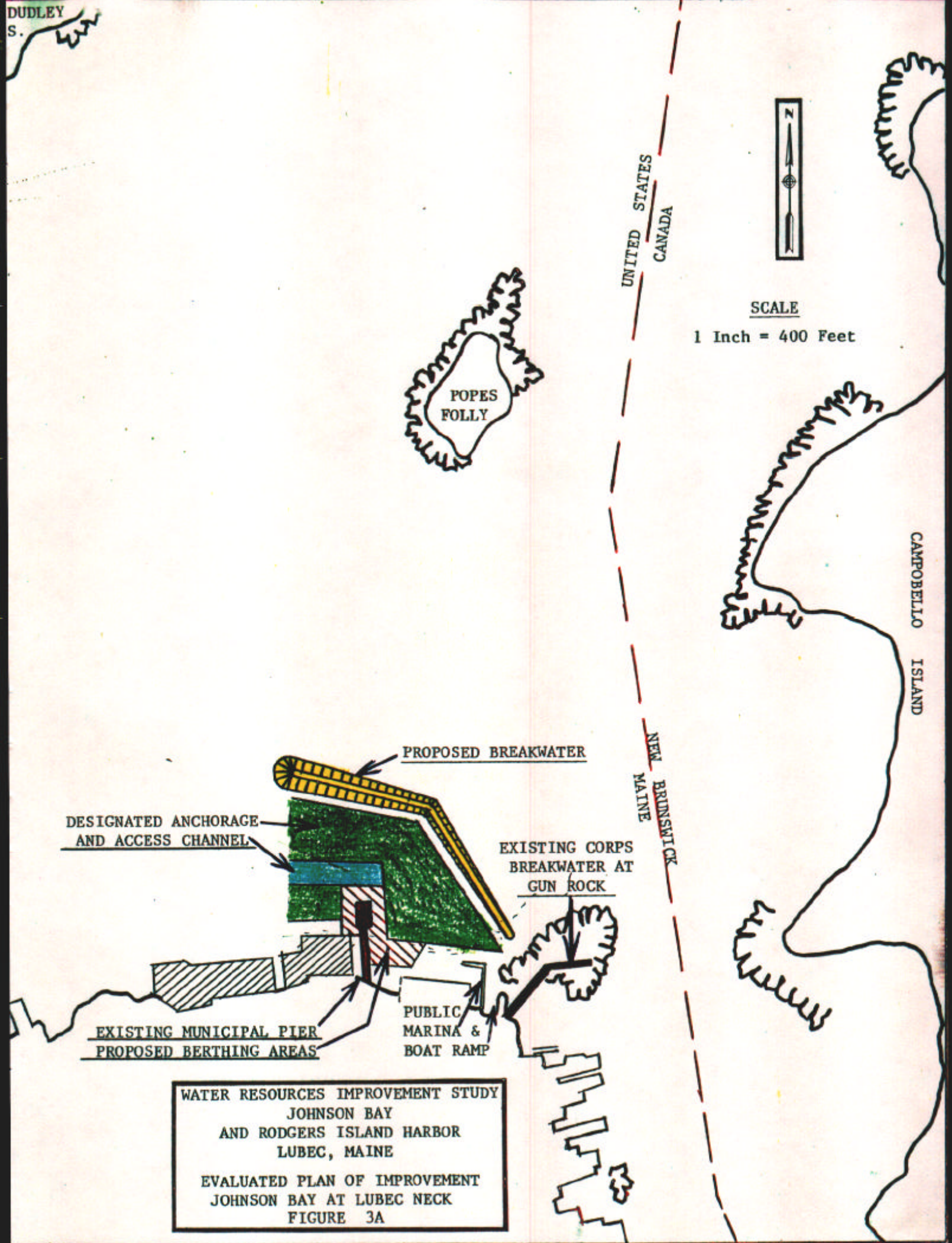
Local interests would be required to dredge berthing areas alongside the existing pier to accommodate the larger finfishing boats and facilitate greater use of the pier for those boats. Depths and areas on the outer end of the pier are sufficient to allow off-loading for a fishing boat and berthing for the ferry or an additional fishing boat. Dredging would therefore only be necessary for finfishing boat berths. The three large sardine boats could be berthed in parallel slips at the seaward end of the pier. Dredging of sufficient berthing and approach areas and depths would require removal of about 2,200 cubic yards of material to form berthing at the end of the pier at local cost.

Construction of the Federal breakwater would require placement of approximately 420,000 tons of stone of which 165,000 would comprise the landward leg and 255,000, the seaward leg. No dredging would be required to form a protected anchorage of about 6.8 acres in the area behind the breakwater. The seaward end of the breakwater would be marked by a navigation aid, a steel tower with a light.

Rodgers Island Harbor

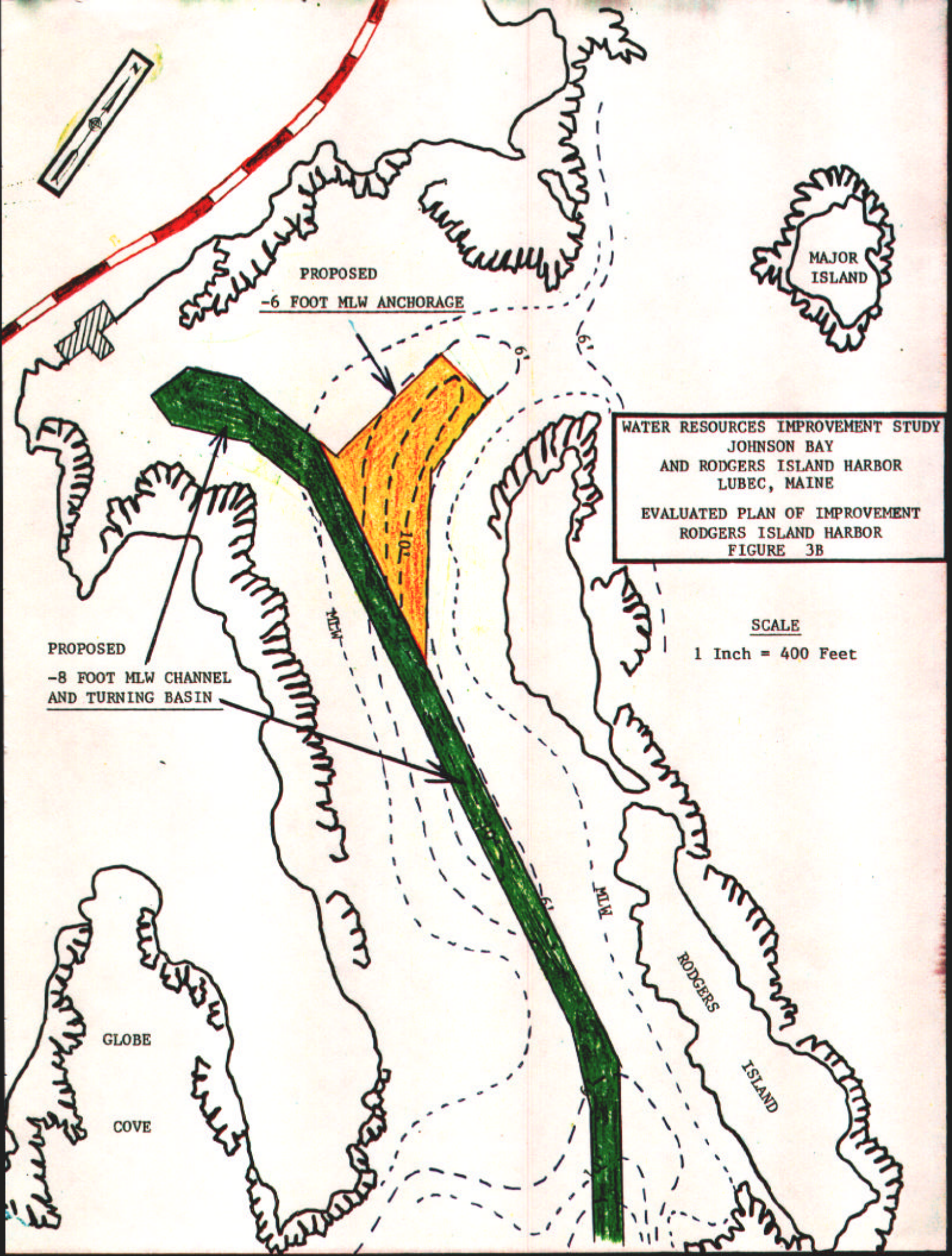
The evaluated improvement for the Rodgers Island Harbor site also consists of both local and Federal improvements. The Federal improvements consist of dredging an access channel, turning basin and anchorage in the harbor. The local improvements would consist of construction of a new fish pier with a berthing area for off-loading catch and a public boat ramp.

Dredging of the Federal improvements would require the removal of about 67,700 cubic yards of ordinary material. The material would be deposited at an upland site in Lubec as fill. The access channel would extend about 3,000 feet from deep water in Johnson Bay north through the



WATER RESOURCES IMPROVEMENT STUDY
JOHNSON BAY
AND RODGERS ISLAND HARBOR
LUBEC, MAINE

EVALUATED PLAN OF IMPROVEMENT
JOHNSON BAY AT LUBEC NECK
FIGURE 3A



WATER RESOURCES IMPROVEMENT STUDY
JOHNSON BAY
AND RODGERS ISLAND HARBOR
LUBEC, MAINE

EVALUATED PLAN OF IMPROVEMENT
RODGERS ISLAND HARBOR
FIGURE 3B

SCALE

1 Inch = 400 Feet

harbor to the turning basin. Dredging of the -8-foot MLW x 80-foot wide channel would require the removal of about 16,300 cy of ordinary material. Dredging of the 200-foot-wide by -8-foot MLW turning basin would require the removal of about 47,700 cy of ordinary material. Dredging to form the full 5.2 acre by -6-foot MLW anchorage would require the removal of about 3,700 cy of ordinary material. The material would be removed by bucket dredge and transported by truck to the disposal site. It is estimated that three new navigation aids, all steel can buoys would be required to mark the access channel at a cost of about $4,000 each.

The local portion of a project at Rodgers Island Harbor would consist of a pier of similar design as the existing one at Lubec Neck, a public boat ramp and berthing areas along the front and one side of the end of the pier for off-loading. The existing Lubec Neck Pier was constructed in 1980 at a cost of $425,000. It is estimated that to construct a similar structure today would cost about $600,000. A 40-foot wide by 200-foot long bituminous launching ramp would cost about $20,000 including gravel subbase and base and top pavement. Dredging of berthing areas at the end and one side of the pier and dredging of ramp access along the other side of the pier would require the removal of about 8,000 cy of ordinary material.

ESTIMATE OF FIRST COSTS

The evaluated Federal plan of improvement for Lubec Neck involves construction of a breakwater 1000 feet long extending from Gun Rock northwesterly 500 feet thence west-northwesterly for a further 500 feet. The rubble-mound structure would have a top elevation of +10 feet MHW a top width of 6 feet and slopes of 1 on 1 1/2. Local interests would be required to dredge berthing space to -10 feet MLW around the existing pier. The locally dredged material would be deposited at an upland site on Lubec Neck. The U.S. Coast Guard would provide and maintain all aids to navigation for marking the breakwater. Specific numbers, locations and costs for navigation aids will be obtained from the Coast Guard during any detailed study phase. Table 1 depicts the estimated first cost of construction of the evaluated plan for the Lubec Neck site based on May 1987 price levels. Statutory limitations restrict Federal funding of continuing authorities small navigation projects to $2,000,000. Any excess costs involved in constructing the Federal improvement project under Section 107 authority would be funded by local interests.

TABLE 1
ESTIMATED FIRST COST
EVALUATED PLAN OF IMPROVEMENT
JOHNSON BAY/LUBEC NECK

Breakwater 420,000 tons @ $20.70 ton delivered and placed	$8,694,000	(99.6%)
Local Berthing Area Dredging 2,200 cy @ $15.50/cy	34,000	(0.4%)
Subtotal	8,728,000	(100%)
Contingencies 20%	1,746,000	
Subtotal	10,474,000	
Engineering & Design	367,000	
Supervision & Administration	628,000	
Aids to navigation (1 tower @14,000)	14,000	
	$11,483,000	
Plus Interest During Construction (26 weeks)	$459,000	
Total project cost	$11,942,000	

The evaluated Federal plan of improvement for Rodgers Island Harbor involves dredging a channel, anchorage and turning basin. The access channel would be -8 feet MLW by 80 feet wide extending 3,000 feet from deep water in Johnson Bay to the turning basin 200 feet wide by -8 feet MLW. The 5.2 acre anchorage would have a depth of -6 feet MLW. Local interests would be required to construct a similar structure to the existing Lubec Neck pier and dredge berthing areas to -8 feet MLW. The dredged material would be deposited at an upland site on Seward Neck. The U.S. Coast Guard would provide and maintain all aids to navigation required to mark the access channel. Construction of the pier and dredging would be simultaneous resulting in a construction period of 15 weeks. Table 2 depicts the estimated first costs of construction of the evaluated plan of improvement for Rodgers Island Harbor based on May 1987 price levels.

TABLE 2
ESTIMATED FIRST COSTS
EVALUATED PLAN OF IMPROVEMENT
RODGERS ISLAND HARBOR

FEDERAL IMPROVEMENTS	
Dredging ordinary material @ $12.50/cy	
-8-foot channel 16,300cy	$ 204,000
-6-foot x 5.2 Acre Anchorage 3,700cy	46,000
-8-foot Turning Basin 47,700cy	596,000
Subtotal 67,700 cy	$ 846,000
Contingencies (25%)	211,000
Subtotal	$1,057,000
Engineering & Design	74,000
Supervision and Administration	74,000
Aids to Navigation 3 @ $4,000 each	12,000
TOTAL FIRST COST	$1,217,000
Interest During Construction	24,000
SUB-TOTAL INVESTMENT COST	$1,241,000
LOCAL IMPROVEMENTS	
Pier Construction	$620,000
Public Launching Ramp	22,000
Berthing and Ramp Approach Dredging	
8,000cy @ $14.50/cy	116,000
SUB-TOTAL LOCAL IMPROVEMENTS	$758,000
TOTAL RODGERS ISLAND HARBOR	$1,999,000

ESTIMATE OF ANNUAL COSTS

Annual charges for interest and amortization of the first costs of construction are based on an estimated project life of 50 years and an interest rate of 8-7/8 percent.

Maintenance dredging would be accomplished periodically as warranted to maintain authorized depths in the Federal channel, basin and anchorage in Rodgers Island Harbor and by local interests to keep berthing areas clear. Neither site could be expected to experience rapid shoaling rates. Both would be well protected from longshore drift areas and lack any tributary streams. Shoaling rates could therefore be expected to be very minor equalling about 2 percent of the improvement quantity per year. Total improvement quantities for both the Federal and local projects are estimated at 75,700 cy for Rodgers Island Harbor (67,700 Federal/8,000 local) and 2,200 cy, all berthing, for the Lubec Neck site. Annual shoaling quantities would therefore be about 1500 cy for Rodgers Island (1350 Federal/150 local) and 50 cy for the local berthing areas at Lubec Neck.

Maintenance of aids to navigation is the responsibility of the U.S. Coast Guard and specific costs will be obtained if any detailed study is performed.

Annual charges for the Lubec Neck site are depicted in Table 3. Annual charges for the Rodgers Island Harbor alternative are shown in Table 4. Also included are the total Federal maintenance costs over the 50-year project life. Funding limitations restrict total Federal expenditures for construction and maintenance over the 50-year project life for continuing authorities small navigation projects to $4,500,000. The total Federal expenditures for the evaluated improvement of the Lubec Neck/Johnson Bay site exceeds this limitation. The estimated total of Federal expenditures for the Rodgers Island Harbor alternative does not exceed this limitation.

TABLE 3
ESTIMATE OF ANNUAL CHARGES
AND TOTAL FEDERAL INVESTMENT
EVALUATED PLAN OF IMPROVEMENT
JOHNSON BAY/LUBEC NECK

Federal Maintenance Costs	
Breakwater Maintenance	$ 59,700
Maintenance of Navigation Aids	1,500
Subtotal Annual Federal Maintenance Costs	$ 61,200
Local Maintenance Dredging	
50 cubic yards @ $15.50/cy	800
Amortization of First Costs	
$11,942,000 x 0.09003	$1,075,000
TOTAL ANNUAL CHARGES	$1,137,000

TABLE 4
ESTIMATE OF ANNUAL CHARGES
AND TOTAL FEDERAL INVESTMENT
EVALUATED PLAN OF IMPROVEMENT
RODGERS ISLAND HARBOR

Federal Maintenance Costs	
Maintenance Dredging 1,350cy @ $13.50/cy	18,200
Maintenance of Navigation Aids (3x$500)	1,500
Subtotal	$19,700
Local Maintenance Dredging	
150cy @ $15.50/cy	2,300
Amortization of First Costs (Federal and Local)	
$1,999,000 x 0.09003 =	$180,000
TOTAL ANNUAL CHARGES	$202,000

ESTIMATE OF BENEFITS

Navigation improvements at either of the two sites, Lubec Neck and Rodgers Island Harbor, both in Lubec would result in benefits to the existing commercial fishing fleet. Commercial fishing benefits have been estimated based on reduced operating, harvesting and transportation costs

and elimination of tidal and storm delays. All benefits have been computed in accordance with the established policies of the Corps of Engineers.

As discussed before, different fleets could be expected to use the two alternative improvement sites. These fleets are described below in Table 5.

TABLE 5
PROJECTED COMMERCIAL FLEETS

Vessel Class	Crew	Total Lubec Boats	Lubec Neck Fleet	Rodgers Island Harbor Fleet
Lobster Boats	1	35	21	27
Multi-Purpose & Scallop Draggers	2	17	5	10
Large Sardine Carriers	3	3	3	-
Total		55	29	37

The sardine carriers will continue to use the private processing company piers regardless of improvements. While they may seek shelter at either improved site when encountering a storm at Lubec, they would not benefit significantly from either alternative.

The smaller lobster boats will take on fuel and supplies and offload catch using dingys at their moorings in small coves or at town floats on Lubec Neck during the summer months. This loading/unloading process consumes about 3 hours of time. The use of a protected pier would reduce this time to about one hour by eliminating the need for multiple dingy trips between ship and shore for each operation. This would result in labor cost savings for the lobstermen during loading/unloading operations. (See Table 6, item 1).

The larger scallop draggers and multi-purpose boats are affected less by weather and do make limited use of the existing pier during calm seas in the summer months. However, for eight months of the year they relocate operations to Eastport, located about 5 miles across Johnsons Bay. This necessitates traveling a greater distance between the fishing grounds and their berths resulting in about one hour extra running time per vessel per round trip. In addition, the 80-mile round trip by auto between Lubec and Eastport for the fishermen would be eliminated by providing a protected harbor at Lubec. A total of 3 hours per fishermen of labor, one hour of vessel running time and 80 miles of land transport distance would be saved for each of the 15 trips per month these vessels make during the 8 month relocation. (See Table 6, item 2).

When working out of Lubec and encountering a storm all vessels can not work on those days and must relocate to safe anchorage until the storm has passed. The smaller lobster boats can use the more sheltered and shallow small coves in North Lubec while the larger scallop and multi-purpose boats must seek deeper water along the western shore of Eastport or behind the Eastport breakwater. During the 8 months that these larger boats work solely out of Eastport, storm conditions do not change their relocated operations. However, during the 4 summer months when they work out of Lubec, storms force then to run for shelter in Eastport resulting in the same type of increased costs as those experienced during the winter relocation. It is estimated that storms requiring relocations occur about twice a month. A protected harbor would eliminate all such relocations. (See Table 6, item 3).

The smaller lobster boats using a new protected harbor would benefit similarly from elimination of storm relocations. Land transportation savings would be negligible since the relocation sites are a short distance away by land. However, it is estimated that one hour is spent getting out to the boat, moving the boat and getting back to shore for each storm incident. Of this time, one-half hour is spent moving the vessel. It is further assumed that one-half of the lobster fleet currently moors in the small protected coves of North Lubec and would not benefit from the elimitation of storm relocations. The one-half of the lobster fleet that would experience an elimination of storm relocations would benefit through labor cost reductions and vessel fuel savings for their entire 9 month season. (See Table 6, item 4).

TABLE 6
EVALUATED COMMERCIAL FISHING BENEFITS

BENEFIT	LUBEC NECK	RODGERS ISLAND HARBOR
1. Lobster Boats - loading/unloading time savings 21 or 27 boats x 1 man/boat x 164* trips x 2 hours/trip x $7.00/hour	$48,200	$62,000
2. Scallop Draggers & Multi-Purpose Boats - Elimination of 8 month Relocations to Eastport (15 months per trip month)		
a. -Labor Savings - 5 or 10 boats x 2 men/boat x 120 trips x 3 hours x $7.00/hour	$25,200	$50,400
b. -Fuel Savings - 5 or 10 boats x 4 gallons/hr x 1 hour x 120 trips x $1.09/gal	2,600	5,200
c. -Transportation Savings - 10 or 20 fishermen x 120 trips x 80 miles/trip x $0.20/mile	19,200	38,400
Subtotal	$47,000	$94,000
3. Scallop Draggers & Multi-Purpose Boats - Elimination of storm relocations to Eastport (4 months).		
a. -Labor Savings - 5 or 10 boats x 1 operator/boat x 4 months x 2 storms/month x 3 hours x $7.00/hr	$800	$1,700
b. -Fuel Savings - 5 or 10 boats x 4 gallons/hr x 1 hour x 8 storm trips x $1.09/gal	200	300
c. -Transportation Savings - 5 or 10 boats x 1 operator/boat x 8 storm trips x 80 miles/trip x $0.20/mile	600	1,300
Subtotal	$1,600	$3,300
4. Lobster Boats - Elimination of storm relocations		
a. -Labor Savings - 10 or 13 boats (half the fleet) x 1 operator/boat x 9 months x 2 storms/month x 1 hour x $7.00/hour	$1,300	$1,600
b. Fuel Savings - 10 or 13 boats x 4 gal./hour x 1/2 hour x 18 storm trips x $1.09/gal.	400	500
Subtotal	$1,700	$2,100
TOTAL COMMERCIAL BENEFITS	$98,500	$161,400
SAY	$99,000	$161,000

* Total boat trips for small lobster boats (28 weeks x 5 trips each plus 12 weeks x 2 trips)

COMPARISON OF BENEFITS AND COSTS

A proposed project's contribution to the national economic development is measured by comparing the project's annual benefits and costs as a ratio. If the benefit-cost ratio (BCR) is greater than or equal to 1, then the project is considered to have a net positive effect on the national economic development.

The Benefit-Cost Ratios for the two evaluated alternative plans of improvement are presented in Table 7.

TABLE 7
BENEFIT - COST COMPARISON

Evaluated Plan	Annual Benefits	Annual Costs	Benefit/Cost Ratio	Net Annual Benefits
Lubec Neck/ Johnson Bay	$ 99,000	$1,137,000	0.09	NONE
Rogers Island Harbor	$ 161,000	$ 202,000	0.80	NONE

CONCLUSIONS

It has been determined, as a result of the preliminary analyses contained in this report, that there is no economically feasible plan for construction of a Federal navigation project in Lubec, Maine, either at Lubec Neck on Johnsons Bay or at Rodgers Island Harbor. While local interests strongly support such improvements, the evaluated benefits to the commercial fishing fleet do not outweigh the costs of such improvements.

RECOMMENDATIONS

In view of the unfavorable findings of this report, it is recommended that no further Federal study of navigation improvements at Johnson Bay at Lubec Neck or at Rodgers Island Harbor, both in Lubec, Maine be undertaken at this time.

JOHNSON BAY
AND RODGERS ISLAND HARBOR
LUBEC, MAINE

SMALL NAVIGATION PROJECT
RECONNAISSANCE REPORT

PERTINENT CORRESPONDENCE

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02254-9149

REPLY TO
ATTENTION OF

CENED-PL-PF (1105-2-10) 31 July 1987

MEMORANDUM FOR: Commander, USACE (CECW-P), 20 Mass. Ave., N.W., Wash, DC 20314-1000

SUBJECT: Section 107 Small Navigation Project, Johnson Bay and Rodgers Island Harbor, Lubec, Maine - CWIS #93115 (2nd Cong. Dist.)

1. Under the authority contained in Section 107 of the 1960 River and Harbor Act, as amended, a reconnaissance study was undertaken to determine the need and feasibility of providing a protected harbor in Lubec, Maine. The study was completed in June 1987.

2. Details of the request, findings and recommendation are presented on the attached continuing authorities fact sheet. Since neither of the two alternatives for protecting Lubec Harbor were found to be economically feasible, it was recommended that no further study be pursued at this time.

3. A letter indicating our findings was forwarded to the Chairman of Lubec's Board of Selectmen on 22 June 1987. A copy of the letter is attached for your information.

THOMAS A. RHEN
Colonel, Corps of Engineers
Commanding

Enclosure

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02254-9149

June 22, 1987

REPLY TO
ATTENTION OF

Planning Division
Coastal Development Branch

Mr. Howard Jones, Chairman
Board of Selectmen
Town Office Building
Lubec, Maine 04652

Dear Mr. Jones:

I am writing to inform you of the results of our reconnaissance level investigation for providing a protected harbor in Lubec, Maine. The study was initiated in response to a request to the Corps by the town at a public meeting held in Lubec on July 17, 1984 to assess the feasibility of constucting a breakwater to protect the municipal fish pier which was completed in 1980. The study was performed under the authority of Section 107 of the River and Harbor Act, as amended.

In addition to the breakwater to protect the municipal pier on the Johnson Bay side of Lubec Neck, my staff also investigated the possibility of a new pier, navigation channel, turning basin and anchorage at Rodgers Island Harbor. Although both alternatives were found to be technically feasible on a preliminary basis, they are not economically viable at this time. A summary of the basic information and conclusion of the analysis is attached.

I rgret that I cannot recommend a solution for providing protection in Lubec Harbor. Should you have any questions, please feel free to contact me at (617) 647-8220 or Mr. Mark Habel, the project manager for this investigation, at (617) 647-8525.

Sincerely,

Thomas A. Rhen
Colonel, Corps of Engineers
Division Engineer

Enclosures

DATE: JUNE 1987
DIVISION: NEW ENGLAND

CONTINUING AUTHORITIES FACT SHEET

1. Project: Johnson Bay and Rodgers Island Harbor, Lubec, Maine - CWIS #93115

Congressional District: 2nd
County: Washington

2. Authority: Section 107 of the 1960 River and Harbor Act, as amended

3. Location of Study Area: Lubec, Maine, is the easternmost town in the United States, located on the eastern Maine coast in Washington County across the Lubec Channel from Campobello Island, New Brunswick, Canada. The geographic scope of the study is limited to Johnson Bay and Rodgers Island Harbor (see Map 1).

4. Dates of Corps Reports:

a. Reconnaissance Study initiated: February 1985

b. Preliminary Reconnaissance Fact Sheet completed: June 1987

5. Problems and Opportunities Identified: At a public meeting held in Lubec on 17 July 1984, the town of Lubec, Maine requested the Corps to assess the feasibility of constructing a breakwater to protect the municipal fish pier which was completed on the Johnson Bay side of Lubec Neck in 1980. Since construction, the use of the pier has been minimal because of the unprotected nature of the northeast shore of Lubec Neck.

6. Alternative Plans Considered: Two alternative plans were considered:

(a) Construction of a dogleg rubble mound breakwater with each leg having a length of 500 feet with a top elevation of +28 feet above mean low water at Lubec Neck/Johnson Bay in order to protect the municipal fish pier and an anchorage. Total project costs including the breakwater and dredging at the existing pier are estimated at $11,483,000.

(b) The development of Rodgers Island Harbor includes the dredging of a navigation channel 80 feet wide and 8 feet below mean low water, extending 3,000 feet from deep water in Johnson Bay to a 200-foot wide turning basin at the same depth. The project also involves a 5.2-acre anchorage constructed to a depth of 6 feet below mean low water, a pier similar to the existing pier at Lubec Neck with berthing areas and a public launching ramp. Total project cost is estimated at $1,999,000.

7. Economic Analysis: The economic evaluation of the two alternative plans for providing a protected harbor in Lubec, Maine are presented below. Benefits are based on the savings to the commercial fishing fleet. These are time savings in loading and unloading vessels and labor, fuel and transportation cost savings since fishermen would no longer need to relocate their vessels during storms if the navigation improvements were made. Benefits and costs of each alternative are compared at the prevailing interest rate of 8-7/8 percent over a 50-year period.

Alternative Plan	Annual Benefits	Annual Costs	Benefit Cost Ratio	Net Benefits
Lubec Neck/Johnson Bay	$ 99,000	$1,137,000	0.09 to 1	None
Rodgers Island Harbor	$161,000	$ 202,000	0.80 to 1	None

Since neither of the two alternatives have benefit-cost ratios of one or greater, there is no economically feasible plan for the construction of a Federal navigation project either at Lubec Neck on Johnson Bay or at Rodgers Island Harbor at this time.

8. Recommendation: In view of the unfavorable findings of the Reconnaissance Report, it is recommended that no further study for providing a protected harbor in Lubec, Maine be undertaken at this time.

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02254-9149

REPLY TO
ATTENTION OF

February 25, 1985

Planning Division
Coastal Development Branch

Mr. Carlton Leighton, Chairman
Board of Selectmen
Town Office Building
Lubec, Maine 04652

Dear Mr. Leighton:

Reference is made to the Section 107 navigation for Johnson Bay, Lubec, Maine The study was initiated to assess the feasibility of constructing a breakwater to protect the local commercial fishing fleet.

At a meeting held in Lubec on July 17, 1984, members of my staff met with you and other state and local interests concerning the subject study. Subsequent to this meeting, we requested that updated fleet statistics and other information be provided to enable the initial study to be completed. Without this information, a determination of Federal interest in navigation improvements at Lubec cannot be made and our study efforts will have to be ended.

If you have any questions concerning the study or the information we requested, please contact the study manager, Mr. Mark Habel, at (617) 647-8525.

Sincerely,

Carl B. Sciple
Colonel, Corps of Engineers
Division Engineer

OFFICE OF TOWN MANAGER

LUBEC, MAINE

April 10, 1981

DANA E. BRADLEY

Steven Andon, Project Manager
U.S.Army Corps of Engineers
242 Trapelo Road
Waltham, Massachusetts

Dear Mr. Andon:

I have been approached by one of the local fishermen, Jim MacDonald, about the possibility of the Corps building a breakwater near the present Lubec Commercial Pier.

I explained to Jim the cost limitations such a project would face, but he remained firm in his conviction that the Corps could help improve the present pier location to allow increased use of the facility.

I would greatly appreciate a letter from you explaining either why a breakwater at the pier location is not feasible or, if new developments have now made construction of a breakwater possible, what can we do to take advantage of the change of circumstances.

Sincerely,

Dana E. Bradley

Dana E. Bradley
Town Manager

DEB/kps

OFFICE OF TOWN MANAGER

LUBEC, MAINE

March 20, 1981

DANA E. BRADLEY

Mr. Steven Andon
Project Manager, Coastal Dev. Branch
U.S.Army Corps of Engineers
424 Trapelo Road
Waltham, MA. 02154

RE: Section 107 Study, Lubec, ME.

Dear Mr. Andon:

At our last meeting you recommended we get in touch with Peter Boyce to make sure the fishermen had an access to Globe Cove before the Corps could help us.

We would like to know if a right-of-way or an easement would be sufficient to satisfy the Corps requirements for constructing a breakwater at Globe Cove site #2.

Sincerely,

Dana E. Bradley

Dana E. Bradley
Town Manager

DEB/kps

OFFICE OF TOWN MANAGER

LUBEC, MAINE

DANA E. BRADLEY

11/24/80

Colonel John P. Chandler, Div. Engineer
Department of the Army, N. E. Division
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel:

During a change of administration in the Town of Lubec the 107 Study for the Breakwater in Lubec by your Department was apparently overlooked.

I would like, at this time, to request a renewal of the 107 Study for the Breakwater in Lubec.

I hope to hear from you in the near future.

Very truly yours,

Dana E. Bradley

Dana E. Bradley
Town Office Manager

DEB/keo

OFFICE OF TOWN MANAGER

LUBEC, MAINE

March 29, 1978

RE: NEDPL-C

Mr. Joseph L. Ignazio
Chief, Planning Division
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Sir:

Sorry we were so long in gathering the seven items requested by you to get the 107 Study underway. Some of the information took considerable time to compile. If there is anything more we can do to expedite this study, do not hesitate to contact us.

Very truly yours,

Carlton R. Leighton

Carlton R. Leighton
Chairman, Lubec Board of Selectmen

TOWN OF LUBEC

Item 1. Economy: The average fish catch landed in Lubec for the past five years is 261,373,710 lbs. This includes all fish products landed here that we could find through available contacts. There are two sardine processing facilities located here, the Peacock Canning Company and Booth Fisheries. Together, they employ over 200 people. There are also two Herring Smokehouses in operation, which employ 10 to 15 persons. A local Fisherman's Cooperative, the Quoddy Bay Fisherman's Cooperative, is in operation to purchase and resell mostly clams harvested locally by its members, but which also has done some marketing of periwinkles and mussells as well. The Washington County Vocational Technical Institute operates a boat-building school in Lubec. The facility houses approximately 75 students plus a cadre of five or six instructors in the boat building trades. The VTI will be expanding this year with a new facility in an adjacent city, Eastport, to include courses in fishing, marine electronics, marine engines, and other marine related fields. The enrollment is expected to increase to 150 students. Our feeling is that graduating classes will mean an increase in the numbers of fishermen and boats operating out of Lubec, beginning in the next three to four years. The Town of Lubec has constructed, and operates, a marina. A considerable number of local pleasure boat owners utilize the launching and tieup facilities. Several fish buyers operate in the area. All except one is a non-resident;i.e. they drive iced trucks into Lubec to pick up the fish from the boats and leave the area to sell the product elsewhere. There is one locally-based company now in operation in Lubec, buying fish, clams, mussells, periwinkles, lobsters, and all other sea products that become available. There are twelve to thirteen persons employed in this operation, plus the people engaged in the actual fishing.

Item 2. Other Development: The Town of Lubec has constructed a public Marina facility, which has been in operation approximately seven years. Federal,state and local funds were spent on the project, costing approximately $60,000.

Lubec is now in the process of constructing a 248 ft. x 15 ft. commercial fish pier with a combination of Economic Development Administration funds, in the form of a grant, and local funds, for a combination of approximately $450,000.

A study is now under way to determine the feasibility of utilizing land adjacent to the commercial fish pier for commercial/industrial construction for marine related purposes. The study will cost $3,500 and will utilize federal, state and county funds.

Item 3. Terminal and Transfer Facilities: Lubec has no terminals or heavy cargo transfer facilities at present. However, there are three or four small docks, two located at the processing plants, and a third and fourth located at private warehouses. Sardine carriers use the private facilities to unload at the respective plants. There are fish pumping facilities also. There is no rail service into Lubec. All cargo transport is accomplished by boat and by truck.

Item 4. Improvements Desired: Such mooring space and anchorages presently exists in the area offers watercraft little or no protection from the elements. However, there are approximately 20 of the fishing boats moored on a continuing basis in the North Lubec area. The Lubec Municipal Officers and Lubec fishermen feel that the construction of a breakwater off the Globe, so-called, in North Lubec wouls be of great benefit by offering the needed protection for not only the 20 vessels presently moored, but also others in the fleet which would be moored there if the breakwater were in place.

Item 5. Existing and Prospective Commerce: We presently have 72 fishing vessels landing an average catch of 261,373,710 lbs. of fish products in Lubec on a full-time basis. The vessels range in size from 30 feet to 60 feet in length, and they harvest lobsters, finfish--such as pollack, cod, sardines and large herring, and some of the fishermen also harvest clams and mussells. After the construction of a new pier for handling the fish harvests and a breakwater, for proper protection, it is estimated that the fleet will grow to more than 100 full time boats, and the annual fish catch would increase by at least 3,000,000 lbs. annually.

There are almost no naturally protected harbors in the Lubec area. As a consequence, there is no designated anchorage or mooring area for the fishing fleet. Vessels are scattered along the coastline, and anchored in every available "nook and cammy" where there is some shelter and deep water. Many vessels are moored, out of necessity, in open, unprotected waters. Also, there has been no protected pier area where fishermen can safely load and unload vessels, except for the privately-owned facilities, which are scarce in number,and which are inadequate to properly serve the needs of the fishermen. Such lack of facilities, and resultant higher risk of loss and damage to property, has prompted fishermen to keep the "old vessel" and gear much longer than they would under better operating conditions. Fifteen fishermen expressed a desire to purchase new boats and gear if a pier and breakwater were constructed to give them better protection from the elements.

Item 6. Vessel Traffic: Statistics showing the volume of vessel traffic in Lubec are not available. However, assuming the fleet is in operation year round, there are approximately 43,920 vessel trips per year. This estimate is based on the assumption that 60 days are lost annually due to bad weather.

Item 7. Benefits: An increase in the number of vessels from 72 to 100 over a five year period, at an average of $25,000 per vessel, would mean an increase in the value of the fleet of $140,000 per year through new vessel construction for a total of $700,000.

An upgrading of the fleet, old vessels and gear replaced by new ones over a three-year period; 5 vessels per year, at an average of $25,000 or $125,000 per year in new vessel construction for a total of $375,000.

An increase in the overall catch as a result of additional watercraft of

5,000,000 lbs. annually.

Approximate landed value of additional annual catch of mixed species of fish would be $200,000.

Cost of annual damage to water or craft as a result of storms, high winds, wave damage, and moorings drifting and breaking loose would be approximately $75.00 to $100.00 per boat, or a total of $7,200.

Summary of Annual Benefits:

Total annual benefits would be:

1st year	$140,000	- new vessels
2nd year	125,000	- new vessels
3rd year	200,000	- landed value of increased catch
	7,200	- reduction of boat damage
	$472,200	- total
4th year	140,000	- new vessels
5th year	200,000	- landed value of incresed catch
	7,200	- reduction of boat damage
	$347,200	- total
6th year	200,000	- landed value of increased catch
other years	7,200	- reduction of boat damage
	$207,200	- total

OFFICE OF TOWN MANAGER

LUBEC, MAINE

1/19/78

Colonel John P. Chandler, Div. Engineer
Department of the Army, N. E. Division
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel:

During a change of administration in the Town of Lubec the 107 Study for the Breakwater in Lubec by your Department was apparently overlooked.

I would like, at this time, to request a renewal of the 107 Study for the Breakwater in Lubec.

I hope to hear from you in the near future.

Very truly yours,

Iley H. Walston

Iley H. Walston
Town Office Manager

IHW/mcc

OFFICE OF TOWN MANAGER

LUBEC, MAINE

7/14/77

Mr. Joseph L. Ignazio
Chief, Planning Division
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Re: Section 107 Study for Lubec, Maine

Dear Mr. Ignazio:

I am corresponding in reply to your letter of 7, June, 1977 concerning the Section 107 study for Lubec.
The following information was compiled by discussion with Selectmen, fishermen, research of records, discussion with the Quoddy Bay Fishermen's Co-op and compilation of data. I anticipate your further reply.

1. The present size of the Lubec fishing fleet is approximately fifty boats, full and part time. There are approximately one-hundred and fifty recreational boats.

2. The average size range of the fishing boat is in the 28 foot to 36 foot range. However, we have at least fifteen boats that exceed forty feet in length. The average size range of the recreational boat is 16' to 24 feet long. Draft is up to 15 feet. Average beam would be 20 feet.

3. Additional boats are expected to use the proposed pier and breakwater facility. I would estimate five to ten per cent more boats will utilize the facility each year after construction.
Also, many of the existing commercial boat owners will buy larger boats. This is particularly valid in the under 30 foot boat owner range.

4. The estimated damage to the fleet due to ice, wind, and waves over the last ten years is in the $200,000.00 to $ 250,000.00 range.

5. The average catch of fish per year per boat is (based on an average):
Annually: 20,000 lbs.---hand lining and trawling
500,000 lbs.----dragging
However, the shellfish (scallops, clams, lobsters)catch can run in the 1.2 to 1.4 million dollar market value range to the fishermen annually.

6. The value of the yearly fish catch (1976 value) is estimated in the two to 2½ million dollar range. This fluctuation is largely due to the difference in the fish catch. The number of fishermen and size of vessels is increasing.

7. The fish catch is expected to increase due to improvements by at least 10% a year. The factors increasing to this increase are:
   a.) Larger craft that can fish off-shore and stay out longer.
   b.) A greater number of fishing craft.
   c.) More efficient harvesting techniques.
   d.) A gradual increase in the supply of fish.
   e.) More pleasure fishermen will turn to part or full time fishing.

8. Rodger's Island, and the mainland west of it is privately owned at the present time. However, Seward's Neck is served by a tarred, town maintained road.

9. The land to the east and west of Lubec Neck is not publicly owned. The only large contiguous mass of publicly owned land is the Quoddy Head State Park.

10. The greater mass of land and shoreline bordering Johnson's Bay on the southwest is not publicly owned. However, there is a small section of shore frontage which is the town gravel supply. This land also borders on State Rt. # 189. A section of shore frontage on the southeast of Johnson's Bay is publicly owned at this time. (See map.)

11. The severity of wind and waves traveling in a northerly direction through Quoddy Narrows is determined by tides, seasons, and the relative direction of the wind blowing to the northerly quarter.

12. Severity of wind and waves traveling in northerly direction through Quoddy Narrows: At ebb tide impassable for boats up to 30 feet---rough going for others. NNE storms present the worst problems with waves up to 10 feet. SE storms create wind problems and waves up to 8 feet. In general it is different in this are from day to day at all times of the year.

13. The Town of Lubec has a clam conservation ordinance which is passed annually at the Town Meeting. This ordinance is approved by the State Department of Conservation and is also required by state law. This ordinance prohibits digging for commercial purposes by non-residents of Lubec. It allows for the sport and commercial digging by residents. The state monitors the "red tide" condition. When the level of toxicity reaches a predetermined level, the flats are closed until it returns to acceptable standards. There are a variety of bills in the Maine State Legislature which would effect shellfish harvesting/conservation.

14. The shellfishing areas in, and around Johnson's Bay are closed from Lubec Neck to the corporate area of the town and along the waterfront of the town. The most valuable shellfishing areas are in South Lubec, along the northeast and west shores of North Lubec (Seward's Neck) in and around Coffins Neck and Denbow Neck.

ADDENDUM:

3. It is estimated that up to 200 boats would use this facility, plus those in transit, annually, after construction.

11. Ice can be bad in the upper area of Johnson's Bay. Winds can be a severe NW wind in the winter. The conditions can be treacherous for small boats up to 30 feet long in the winter.

Comments and pertinent information:

Adequate fishing facilities and related support facilities would increase employment. Civil unrest would be reduced. The morale of the people would be greatly improved.
People would be depending on themselves instead of others and welfare.
A pier with an L or T abutment would increase productivity of the area; also incentive for boats in transit to tie up, refuel, buy groceries, etc.
The construction of a pier would also institute a processing plant.

Respectfully yours,

E. Jeffrey Barnes
Town Manager

EJB/kps

OFFICE OF TOWN MANAGER

LUBEC, MAINE
1/31/77

Colonel John P. Chandler
Corps of Engineers
Division Engineer

Dear Colonel Chandler,

I have reviewed your letter of Jan. 26, 1977 and found the timetable you expressed acceptable to our community development plans. The economy of Lubec needs such a facility to protect an increasing fishing fleet.

We are proceeding with our plans for a commercial dock and related facilities.

Therefore, I will anticipate such a study being initiated by July of 1977.

We would appreciate your co-operation in this matter.

Respectfully yours,

E. Jeffrey Barnes,
Town Office Manager

EJB/gm

3 FEB 1977

NEDPL-C 26 January 1977

SUBJECT: Section 107 Reconnaissance Studies for Back Cove, Portland, Maine and Lubec Harbor, Lubec, Maine

HQDA (DAEN-CWP-E)
WASH DC 20314

1. This office has recently received requests from two different municipalities asking for the initiation of small navigation improvement studies pursuant to Section 107 of the River and Harbor Act. The formal requests are:

Back Cove, Portland, Maine - Letter dated 6 January 1977 from the City Manager requesting improvements for recreational boat navigation in Back Cove. A copy of letter is inclosed.

Lubec Harbor, Maine - Letter dated 16 December 1976 from Town Manager requesting breakwater protection for the existing harbor in Lubec. A copy of letter is inclosed.

2. Revolving fund accounts in the amount of $5,000 each will be set up for completion of individual reconnaissance reports to determine the need for full scope Section 107 detailed project reports. Officials of the affected communities are being notified of the establishment of the study fund accounts and that work will be initiated as soon as capability allows.

JOHN P. CHANDLER
Colonel, Corps of Engineers
Division Engineer

2 Incl
as

OFFICE OF TOWN MANAGER

LUBEC, MAINE

12/29/76

Mr. Oscar C. Arpin
Department of the Army Corps
424 Trapelo Road
Waltham, Mass. 02154

Dear Mr. Arpin,

As we discussed our telephone conversation of Wednesday, December 29th, your office will be forwarding a correspondence concerning the timetable for the feasibility study of safe harbor facilities in Lubec.

We understand the financial and manpower limitations under which your department must function. However, as you stated, we do expect the study to be initiated by late Spring or early Summer, 1977.

We anticipate funding for the commercial dock in 1977-78 fiscal year (if the project receives local approval). Therefore, the safe harbor study would prove feasible in conjunction with the pier funding process.

Your co-operation is appreciated.

Respectfully yours,

E. Jeffrey Barnes,
Town Office Manager

EJB/gm

OFFICE OF TOWN MANAGER

LUBEC, MAINE
December 16, 1976

Department of the Army
Corps of Engineers
Oscar C. Arpin, P.E.
424 Trapelo Rd.
Waltham, Ma. 02154

Dear Mr. Arpin:

The Lubec Board of Selectmen have formally directed me to communicate with you concerning a study of the need, feasibility, and engineering facets of a breakwater, or safe harbor, for Lubec.

We have met with Mr. Oscar C. Arpin, Chief Coastal Development Branch of your office. He disseminated information, answered questions, visited sites, and advised us of the two main routes that may be pursued in requesting that a feasibility or need study be initiated.

Lubec is in the process of developing a comprehensive commercial dockin facility. Therefore, it is of immediate concern that the possible sites for a safe harbor in Lubec be adequately evaluated.

The fishing industry is our major economic resource and the major contributor to year-round employment. Therefore, the future economics of the town must be adequately planned for.

Therefore, it would be appreciated if the U.S.Army Corps of Engineers would initiate such a study in Lubec as promptly as possible.

Mr. Arpin has a copy of the EDA feasibility study of the proposed dock for your evaluation.

We desire your comments on the structural design qualities and on modifications which you feel should be incorporated into the original plan.

Respectfully yours,

E. Jeffrey Barnes
Town Office Manager

EJB/hb

OFFICE OF TOWN MANAGER

LUBEC, MAINE

10/1/76

Dept. of the Army
Corps of Engineers
New England Division
Oscar C. Arpin, P.E., Chief
424 Trapelo Rd.
Waltham, Ma 02154

Dear Sir;

The Town of Lubec is in the process of planning a Commercial Dock. A 1972 Economic Development Administration Technical Assistance Study was done on this project. At that time a permit was granted for this project from the Corps of Engineers.

The site for the project will probably be the same area that is stated in the 1972 study.

Presently, the fishermen of the Lubec area do not have a safe harbor. The docks for commercial vessels were generally destroyed in the Feb. 2 gale. Therefore, it has been illustrated that a pier would receive much more utilization with a contigous breakwater. Presently, the most immediate need is the safety of the fishing fleet. Many of the fishermen are hesitating to expand their operation until a safe harbor is constructed.

The 200 mile limit and a proposed Fisheries Technology School in the area are factors which will increase our need for the facility. The economic base of Lubec is based on fishing. Our existance as a town will depend largely on construction of this economy.

I would appreciate application material and a letter outlining the procedure and process for application. Your consideration of this project is greatly appreciated.

Respectfully yours,

E. Jeffrey Barnes

E. Jeffrey Barnes
Town Office Manager

EJB/gg

OFFICE OF TOWN MANAGER

LUBEC, MAINE
September 29, 1976

Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Ma 02154

Dear Colonel Mason,

The Town of Lubec is investigating sources of funding assistance for a pier-breakwater facility.

The gale of February 2, 1976 has rendered the remaining docks in town unservicable for a commercial vessel. Therefore, the local fishermen have had great difficulty in loading gear and unloading their catch. In inclement weather, or at refurbishing time, the vessels do not have an adequate docking facility. I feel Lubec's economy would benefit tremendously from the construction of such a facility. The 200 mile limit, improved fishing conditions, a proposed fisheries technology school, and an expanded fishing industry are factors which illustrate a need for a pier/breakwater complex.

Presently, we have a number of local fishermen who are interested in expanding their operation. With larger fishing vessels, it will be necessary to have a port of refuge. Geographically, Lubec is the most prominant point for international customs, immigration, and trade in eastern Maine.

I would appreciate it if you would outline the proper procedure for priority listing and funding for study and construction funds.

Respectfully yours,

E. Jeffrey Barnes
Town Office Manager

EJB/hb